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NOTES

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CONDITION OF ZOOLOGY,

FIFTY YEARS AGO AND TO-DAY;

IN CONNECTION WITH THE GROWTH OF THE
ESSEX INSTITUTE.

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A most natural and appropriate theme for discourse on this, the fiftieth anniversary of the Essex County Natural History Society, would be a review of the sciences and their progress during the last half century. So wonderful and prodigious has been their growth however, that neither time nor strength has permitted the preparation of such a review. In lieu of this we may with propriety run back to the time of the first organization of this society, one of the first of its kind in the country, and contemplate the condition of affairs then, and the attitude science presents to-day.

At that time the burden of general discourses on zoölogical science was mainly of an apologetic nature. We were invited to steal away from the perplexing cares of life to quiet retreats and soothe ourselves in contemplating the beauties and wonders revealed to us in the products of nature's handiwork. Newton's apple, Young's soap-bubble, and Galvani's frog, as illustrations, were always at hand to show what great fields of research had been opened by the observation of simple facts; but fifty years have rendered science such a power in the world that its study no longer requires an apology. Indeed, so many and such wonderful results have grown out of the most trivial beginnings that, nowadays, a man might thoughtfully and systematically study the flight of motes in the air and still be regarded as sane.

Every established fact in nature, however insignificant it may seem, is of importance. To-day, as well as fifty years ago, one might indeed find rest and infinite pleasure in turning from the tiresome thoroughfares of activity to a contemplation of nature's marvels. And herein lies the very great difference between the Society of Natural History fifty years ago and similar associations of to-day. The work done by these societies in past times is now relegated to the individual care of those who wish for a relief from the strain of business activities. Hogarth, in a letter to Ellis, portrays very well the spirit that animated many of the workers of the past, as expressed in the prefatory pages of their works. He says: "As for your pretty little seed-cups, or vases, they are a sweet confirmation of the pleasure Nature seems to take in superadding an elegance of form to most of her works, wherever you find them. How poor and bungling are all the imitations of art! When I have the pleasure of seeing you next we will sit down—nay, kneel down if you will—and admire these things." The societies of to-day, if they are to be of any use, must be cared for by trained and salaried specialists. In past times a few genial and pleasant people sauntered leisurely through the cabinets and admiringly examined the graceful shell or curious fossil. Now thousands of eager and critical students throng through the same halls, hungry for the impressive lessons that greet them from every case.

Through the all-embracing doctrines of evolution, man has awakened to the vivid realization that he is part and parcel of the domain of nature, which he had heretofore studied as a matter apart and beneath him. The realms of thought opened by Darwin show how intimately he is connected with the animals below him, and that somehow his welfare, moral and physical, is to be affected by a

more intimate knowledge of the life history of those creatures which he had only regarded with a curious eye.

The record of this society is one that may well excite pride, not only for the great work it has accomplished, but for the dignity of its past history. Its first journal was issued nearly fifty years ago, at about the same time with the journal of the Boston Society of Natural History and its publication had only been anticipated by those of the American Philosophical Society, the American Academy of Arts and Sciences, which dates from the latter part of the last century, the Philadelphia Academy and the New York Lyceum of Natural History. Indeed, these societies had issued but few numbers of their publications, when this institution, as represented by the Essex County Natural History Society, published the first number of its journal, and since that time a continuous series of scientific papers has issued from its councils.

Another matter for congratulation is that this society has always kept true to its name. It has been wholly for the benefit and in the interests of the good old county of Essex. Public meetings to the number of over two hundred in all, have been held in every corporate town in the county, with but one exception; and the enthusiasm of its members has often led it beyond the limits of the county and of the state. These excursions have gone into out-of-the-way places,—little villages, crossroads and hamlets by the sea. In short, the society has met in sixty-eight localities outside the corporate limits of Salem.

To these places has the society induced the celebrated naturalists of the country to bring the results of their researches, and the latest and freshest fruits of science. Agassiz, Wyman, Rogers, Jackson, and the younger generation of naturalists, Putnam, Verrill, Hyatt, Packard, Scudder, Allen, Coues, Dall, Gill, Kingsley, Robin-

son, Emerton and a host of others, have from time to time addressed the citizens of this county on almost every conceivable topic within the domain of natural science, while papers and memoirs from their pens have enriched the pages of your publications.

No better evidence can be adduced of its county character than the fact that its members are by no means confined to Salem, but are found scattered throughout the county, and the further fact that this important anniversary is being celebrated not in its halls at Salem, but here in this beautiful town of Topsfield.

In further evidence of the fact that it is a county society, it has especially aimed at forming a collection of the animals and plants of Essex County, and through the devotion of Putnam, Cooke, Richard H. Wheatland, Robinson, Sears, Emerton, and many others, it has brought together a local collection of the first importance in this country. It can be said, without fear of contradiction, that in no other society in America can so complete and exhaustive a local collection of animals and plants be found, as has been brought together by this society. A general review of this nature will not permit us to point out the numerous species new to science or forms new to the state which have been added by these assiduous efforts.

Let us glance at the first volume published by the society nearly fifty years ago, and catch a glimpse of the poverty of resources with which these early pioneers heroically set out in their task. In this volume was published a catalogue of books, the working tools of a naturalist. A few of our lunch baskets might have held the entire library, and this collection consisted of a few volumes of the transactions of the Philadelphia Academy, and the opening numbers, with pages freshly cut, of one or two other societies, containing the germs of American zoölogy.

and botany. This material consisted almost entirely of specific descriptions and the modest establishment of a few new genera. Outside of these publications, with the exception of works by Audubon, Nuttall, Wilson and a few others, there was absolutely nothing to which the student could refer to aid him in his studies. Since that time what wonderful progress ! States with their organized scientific surveys, fish commissions, state boards of health, mindful of the germ theory of disease, and above and beyond all, the stupendous achievements of the United States Government Surveys with their great libraries of publications freely distributed throughout the land !

When our venerable president, Dr. Wheatland, first taught the young and ardent naturalist Stimpson the mysteries of dredging from a dory, how little could he have anticipated that within so short a time a United States' steam vessel, fitted with dredges and all the paraphernalia of deep-sea collecting, and attended by a corps of trained naturalists, should visit the county for several successive seasons for the sole purpose of dredging, and that this government and European governments should sustain expeditions for the purpose of dredging in the deepest abysses of the ocean !

At that time there was not a single text-book of zoölogy in our schools ; now, nearly every high and classical school in the land has its classes in zoölogy and botany. Then not a college in the land with its special professor of natural science ; now, every college with its special instructor in those branches and with rapidly growing museums. At that time not a single popular periodical devoted to these sciences ; now, a number of illustrated weeklies and monthlies with large circulation. And here it is a matter of pride to state that the first and among the most important of these magazines, the American Natural-

ist, came into existence under the support and patronage of the Essex Institute, whose name it bore upon its cover during its earliest years, having in reality been founded and edited by one of its members.

At that time the newspapers recognized science by publishing now and then short paragraphs about five-legged kittens, or accounts of the hackneyed drop of water with its myriads of animalcules disporting within. Now, the freshest results of science published in technical language appear side by side with the gossip of the town. A comet appearing then was dismissed with a paragraph of a few lines or an apostrophe in the poet's corner. Now, the daily paper publishes a whole broadside about the subject from the pen of some able astronomer and illustrated by diagrams. It is safe to say that the daily newspapers of the country in a single day publish more strictly scientific matter than could be brought together in all the pages of a scientific library of fifty years ago. At that time a few men with unvarying monotony akin to an inherited instinct were recording the daily winds and temperatures ; now, we have an organized meteorological bureau whose weather predictions have excited the admiration of the world.

At that time the science of archæology was not born. Evidences of the high antiquity of man had been brought forward only to be rejected as contrary to Jewish chronology ; now, it is the most vigorous and aggressive of all the sciences, and one of Essex County's gifted sons, Mr. Putnam, whose name has been so intimately identified with the work of this society, is at the head of an endowed museum of archæology at Cambridge, and is for the first time teaching the country the proper and only way of exploring the mysterious mounds of the West. His discoveries thus far have revealed such rich fields

of research in our country that one is led to wonder that a single penny should ever be spent abroad for work of this kind while so much remains to be done here.

To come nearer home. At that time the unrivalled ethnological collections of the East India Marine Society could be got access to only by soliciting permission from some one of its members, most of whom at that time were scattered over the world in the interests of Salem's commerce. Now, through the liberality of the great Essex philanthropist, in founding the Peabody Academy of Science, and the wise administration of its trustees, these invaluable collections are open daily, free to all, and a throng of forty thousand people annually pours through the open doors. Liberal provisions are made to augment these collections and the additions in the past ten years have outnumbered the original collection. The biological collections of this society, as well, have been cared for in the same manner and are equally accessible.

As to the growth of the Institute it is a matter of wonder and pride that, until recently without special funds, save what it derived from the annual assessments of its members, it should have obtained the position it holds to-day.

It is almost pathetic to read the first address by Prof. John L. Russell before the society in 1836, and see how meagre were the possessions over which its members were felicitating themselves. Mr. Russell speaks in glowing terms of the "spacious and commodious halls, furnished with elegant and useful cabinets" and the library of one hundred volumes! And this was absolutely all: a few heroic members paying out of their own pockets in disproportionate sums the funds necessary to sustain even this display. How faintly could he have conceived that within fifty years this society should have grown to one of three hundred and forty members, with a library

of thirty-eight thousand volumes and invested funds to the amount of fifty thousand dollars.

While this prosperous growth is due in part to the rich intellectual soil from which it sprang, a very great credit is due to the unselfish and unceasing labors of its one persistent associate, our devoted president, who has been with it from its inception and who as an officer has been intimately connected with it at every stage of its development.

It is not a little remarkable that an organization embracing, as it has for thirty-five years, an historical as well as a natural history society, should have received from this man impartial solicitude and attention. Voluminous papers and memoirs, historical and biological, have been published in its proceedings. Matters pertaining to both subjects have often come up for discussion at the same meetings, and yet there have been no dissensions nor jealousies between the two branches. No factions have developed. The curse of political methods has never entered its councils. Perhaps it augured well for the society that its first act of incorporation was signed by educators and statesmen, by Horace Mann, then President of the Senate and Edward Everett, Governor of the Commonwealth.

Surely such harmony indicates the patience and sagacity with which its work has been guided. Certainly the highest compliment our president could receive is, that during the space of fifty years in which time he has successively held all the offices to the highest, he has been heartily seconded in every effort for its welfare.

With all this vitality and growth, this society is the only one of any age and importance in the country that has never had a home of its own. The Portland Society of Natural History, though twice burned out, has still a

building of its own. The Boston Society of Natural History, the Antiquarian Society at Worcester, not to mention other societies throughout the country, occupy buildings which they possess through the liberality of their patrons. This society, on the contrary, has had to hire rooms from the moment of its inception to the present time. Its name has been carried, on its publications, to the four quarters of the globe, yet it has never had the supreme comfort of seeing permanently wrought in stone over its own door the name which has done the county so much honor and credit at home and abroad.

At present it finds accommodations in rented rooms in a building far from fire-proof where it has stored away portraits and manuscripts of inestimable value, and its shelves fairly groan with the weight of its library accumulations, yet no citizen of the city or county has been prompted to perpetuate his name by securing for this worthy society a permanent habitation suited to its rapidly increasing needs.

In fifty years the society has attained more than its most sanguine friends could have hoped for. May it not be many years before successful efforts shall be made to secure a solid and fire-proof structure over whose portal the name of the Essex Institute shall be wrought in enduring stone, as a memorial of the past, and an inspiration for the days to come !

110